

that there is a double spring moult, first into a transitional and then into a distinct summer dress? And what becomes of the moulted feathers, since the most careful search does not discover them to the owner of the bird?

I shall forward my dead bird to the Natural History Museum at South Kensington, where it will be available for examination and therefore of more use than in my own cabinet.

[The example of *Pyromelana oryx* referred to by Dr. Butler is now in the British Museum, and does not in our opinion, or that of others who have examined it, warrant the conclusion that the colour-change is brought about by the absorption of fresh-colour by the old feathers. Both it and other examples, especially one collected by Mr. Swynnerton in Rhodesia in November (reg. no. 1911.5.30.394), show undoubted signs of moult.—Ed.]

XXIII.—*Field-notes on some of the Waterfowl of the Argentine Republic, Chile, and Tierra del Fuego.* By F. E. BLAAUW, C.M.Z.S., M.B.O.U.

(Plate XIV. & Text-figure 12.)

In some previous papers I have given details of the breeding and development of some of the Waterfowl of South America from experiences gathered on birds kept by me at Gooilust. In the spring of 1911, during a trip to South America\*, one of my objects was to see as much as I could of the Waterfowl of that country.

In the following notes I give the results of my observations concerning those Waterfowl in their native haunts. My route was as follows:—

From Buenos Ayres, across the Andes to Santiago, from Santiago southward, crossing and recrossing the Andes between the Lake Todos los Santos and the Nahuel Huapi Lake, from there to Puerto Montt, back northwards to Corral, by ship to Punta Arenas; from Punta Arenas to

\* See 'Notes from the Leyden Museum,' vol. xxxv. 1912, pp. 1-74.

Tierra del Fuego and back; from Punta Arenas through the Smith Channel, the Chonos Archipelago, the channel to the east of Chiloe, to Concepcion, and back to Buenos Ayres.

The observations were all made during March and April 1911.

***Phœnicopterus chilensis.***

In a large shallow lake which I passed in the railway, travelling from Buenos Ayres to Mendoza, not far from Rufino, I saw thousands of Flamingos standing in the water. This was in the beginning of March.

On my way home two months later, passing this same lake again, it was almost dry and nearly all the birds had left it.

During the second half of April I saw five specimens in one of the Jente Grande lagoons in the north-west part of Tierra del Fuego. These birds were very wild. I was informed that they come there during the winter only.

***Cygnus melanocoryphus.***

I saw no specimens of this species in Chile proper nor on the Pampas as I travelled from Buenos Ayres to Santiago.

I only met with them in Tierra del Fuego on a large lagoon which I passed between Porvenir and Jente Grande. A very large number of these birds was assembled there, several hundreds, and they were so tame that I could ride to the margin of the lake without their taking wing. It was a beautiful sight.

These Swans, I was informed by Mr. Hobbs of Jente Grande, breed on the Jente Grande estate, but seldom succeed in bringing up other than small broods.

***Coscoroba coscoroba.***

I met with the Coscoroba Swan only twice. The first time (it was in the beginning of March) I saw half-a-dozen swimming in a shallow pool close to the railway-bank not very far from Rufino, as I travelled by rail from Buenos Ayres to Mendoza. The second time I met with these birds

was in Tierra del Fuego in the second half of April. I was riding from Porvenir to Jente Grande, on the north-western part of the island, and on my way passed near a large lagoon.

In this lagoon there were great numbers of Coscoroba Swans; they challenged me with their call of "Coscorobá" as I got near. A little later on, in what I considered to be part of the same lagoon, I saw a few more.

Unfortunately, I forgot to inquire if the Coscoroba ever breeds in Tierra del Fuego.

In 'Notes from the Leyden Museum,' vol. xxxv. note i. p. 50, pls. i. & ii., I have described and figured the newly-hatched chick of the Coscoroba, from a chick bred in Woburn Park. The chick is white, with dark grey markings on the head and upper parts. The head-markings resemble in style those of a *Dendrocyena*; those of the back closely resemble those of a chick of a Shell-Duck, but are not so heavy. The Coscoroba, to my mind, is a gigantic Tree-Duck.

#### *Chloëphaga hybrida.*

I met, for the first time, with the Antarctic Goose in Smith Channel, shortly after having left the Straits of Magellan, going north. They were standing on the water's edge at the base of mighty rocks. The beautiful white male was like a spot of snow, and was visible at a great distance. The blackish-brown female was much more difficult to see.

During the whole of my voyage through Smith Channel and its continuation, Antarctic Geese were constantly seen. They were generally noticed in pairs or in small families of five to seven, and occasionally I saw a solitary male. They were always near the water's edge and often on bare rocks projecting out of the water. They are entirely confined to the sea-shore, and I never saw them on a sandy beach. They haunt the rocks and the stones on which a peculiar edible species of seaweed grows, called "*Lutche*" by the natives, and on which they may be seen feeding when the tide is low. They probably also feed on marine animals, which they find in the same places.

In Slight Harbour, Happner Sound, in the Gulf of Peñas, I saw a solitary white gander sitting on the rocks and pebbles on the sea-shore. It seemed to be the king of a whole tribe of *Phalacrocorax albiventer*, one *P. brasiliensis*, and numerous *Larus dominicanus*, which were surrounding it.

The northern coast of the Island of Ascencion (the most northern island of the Chonos Archipelago) seems to be one of the strongholds of the Antarctic Goose. They were numerous in small families all along the water's edge, and the captain of the vessel, who had travelled along this coast for many years, told me this was always the case. In this place the birds were called "Kaïks" by the natives, whilst in the south they called them "Kaïkénes."

These Geese are said never to go inland and never to gather into large flocks like other species of Geese.

At Melinka I went ashore, and, following the coast, I had an excellent opportunity of studying the Geese, as they were very tame. The adult male is a beautiful bird. It is about the size of the Ashy-headed Goose, but stouter in build. The whole plumage is snowy white; the bill is black, and so are the glistening large eyes. The legs and feet are a light citron-yellow. The adult female has a yellowish flesh-coloured bill, a yellow ring round the eyes, and pale yellow legs. The general colour is dark brown and black finely streaked with white. The head is brown. The shoulders, back, and tail are white, and very conspicuous when the bird flies.

The young birds of the year, before they have moulted, are more or less similar to the female, but the colours are duller. The tail is white with black spots, and the bill and legs are blackish.

I think it probable that at the first moult the young male moults all his feathers except the large flight-feathers, which are retained until the second moult. The result of this is a white bird with black flight-feathers, with yellow legs and black bill. I saw several birds in this stage at Melinka.

A friendly native sold me a living bird in its first plumage,

which I brought home with great difficulty, and which proved to be a male.

From Melinka I went to the south coast of Chiloe, and on this coast, which is rocky, I saw the last of the Antarctic Geese. Farther north, on the eastern coast, the coast of Chiloe is sandy, and no more Geese were seen.

The south coast of Chiloe, therefore, seems (at least on the eastern side of the island) to be the most northern limit of their distribution.

In the Museum of Santiago in Chile, and also in the Museum of Padre Borgatello in Punta Arenas, I saw chicks in down of *C. antarctica*. They were coloured as follows:—Light silvery grey, a darkish line over the wings, a dark spot over each thigh; white eyebrow-streaks, and a white underside.

#### **Chloëphaga inornata.**

This Goose is often called the Chilean form of *Chloëphaga magellanica*. This is rather misleading, as this species of Goose is not peculiar to Chile, nor even of very common occurrence in that country, so far as my experience goes. I have been over a good part of Chile, from Santiago southwards, but I have not seen a single specimen.

Hudson saw great flocks of it in Patagonia, near the Rio Negro and Rio Colorado, and he mentions that in winter it goes as far north as fifty miles south of Buenos Ayres. I myself saw in Punta Arenas tame specimens that had been captured on the mainland, to the north of that place.

It inhabits Tierra del Fuego in countless numbers, and the first birds I saw on a sand-flat before reaching Porvenir was a great flock of these Geese.

Later on, more inland, I saw it everywhere, and it seems to be specially attracted by the fine grass, which is a result of the grazing of the sheep. It is a most ornamental feature of the landscape, and its coloration harmonizes to perfection with its surroundings.

The settlers found that very little could be done in the

way of shooting to diminish their numbers, as the birds after a few shots became so wild that they could no longer be approached; the old birds are not very much molested for the present. The nests and the young are, however, destroyed in a most disgraceful way.

The birds are residents in Tierra del Fuego, but everything about their life-history is, apparently, not known. For instance, people there told me that these birds had never been found moulting and unable to fly.

This, of course, is an error, as semi-domesticated Geese of this species moult their flight-feathers exactly like other Waterfowl (*Anseranas semipalmata* excepted, which moults its flight-feathers like an Ibis and can always fly).

This belief only makes it likely that at the critical time the birds wander away to some unknown or uninhabited part of Tierra del Fuego, or its adjacent islands, where they can moult in peace and security. This is probably the only thing that preserves the species, as the settlers would certainly destroy them in great numbers if they moulted in inhabited or accessible country.

The lagoons near Jente Grande, or some of them, are very shallow in some parts, and it was a surprising sight to see a number of these Geese quietly standing on one leg, without wetting their underside, in the midst of a large expanse of water, which, naturally, one would expect to have been much deeper.

#### *Chloëphaga magellanica.*

Amongst the countless numbers of *Chloëphaga inornata* which I saw in Tierra del Fuego, I have only seen very few white-breasted birds belonging to the allied *C. magellanica* of the Falklands. They were probably stragglers that had lost themselves amongst the flocks of *C. inornata*. I did not see single flocks, however small, of these birds alone.

The young of *C. magellanica* in their first plumage have generally slightly barred or spotted undersides. After the first moult they acquire the white underparts. The white,



as the bird gets older, inclines to extend itself. This is not the case with *C. inornata*, which is and remains striped, even in extreme old age.

Although isolated specimens of this species may occasionally wander to other places, it seems likely that it is peculiar to the Falklands and has its true habitat there, whilst everywhere else in South America, in Tierra del Fuego and its adjacent islands, and on the mainland, the usual form is *C. inornata*.

#### *Chloëphaga poliocephala*.

I was told in Tierra del Fuego that the Ashy-headed Goose is a scarce summer visitor to the island, breeding there in small numbers. In autumn it is said to sometimes associate with the flocks of *Chloëphaga rubidiceps*.

I myself did not see a single example, although I could approach the flocks of *C. rubidiceps* close enough for inspection. Nor did I see any by themselves.

On the mainland, behind Punta Arenas, it is also said to breed, and in the Museum of Padre Borgatello of that town were some specimens that had been obtained during the breeding-season in the neighbourhood.

In Chiloe this bird is said to be abundant in some seasons and to breed there. In Puerto Montt I saw a female in confinement which was said to have been obtained in Chiloe.

#### *Chloëphaga rubidiceps*.

This pretty little Goose is a very common inhabitant of Tierra del Fuego, although its numbers are not to be compared to those of *Chloëphaga inornata*.

It is a summer visitor to the island, and leaves in April to spend the winter in the north on the mainland of Patagonia. I saw large flocks near Jente Grande and Estancia Sarita, about the 11th of April, ready to leave. The birds were quite tame.

The English settlers call these Geese "Brent."

In the Museum of Padre Borgatello at Punta Arenas were several specimens from that neighbourhood, where they also breed.

**Chloëphaga melanoptera.**

On the way between Los Sauces and Purén in southern Chile \* I met with a flock of some dozen or more of the Andean Goose.

I was riding through a plain, or plateau, at the foot of the Maritime Andes, when two pairs of large birds came flying over my head to alight in a swampy meadow, through which ran a small stream.

The birds when flying look stouter and shorter than the Magellanic Geese, on account of their shorter necks.

The two pairs of birds on alighting were greeted by a number of others of the same species, and I could notice the way they have of puffing themselves up when taking notice of each other, just as I had seen my tame birds of this species do at Gooilust.

In the same meadow were some Black-faced Ibises and also some Cayenne Lapwings.

The birds were not wild, and quietly grazed towards me.

In the Museum of Santiago de Chile there are several specimens of the Andean Goose obtained in that district in the Cordilleras.

The females resemble the males, but are smaller and a little more faintly marked.

An immature specimen resembles the adults, but the black markings are more brownish and not so clearly defined.

A chick in down, marked "26 Febr. Cordilleras de Santiago," was white, with a black line from the base of the bill over the head, the neck, and the back, including the tail; a black crossband over the wings, and, posteriorly, a black patch on each side over the thighs; a black spot over each ear.

The native name is "Pinquén."

**Anas specularis.**

I once met with the White-faced Duck in a wild state and saw two in confinement.

The wild birds I saw on the banks of a stream which flows

\* About 38° South Latitude.



into the Lake Todos los Santos in southern Chile. There was an open space on the banks of the stream near some bamboo-bushes, and there were six birds of this species, which let me come very near, so that I could easily identify them.

Later on, on my way home, I spent a day at Concepcion in southern Chile, and there, in a kind of model garden, I found in a small enclosed piece of water two splendid males of this species. The legs and feet of these birds were of a beautiful orange-yellow \*, the iris was black-brown, the bill was blue-grey with an elongated black spot on the top near the forehead, the nail was also black.

The wing-speculum of these birds was beautiful beyond description.

The native name is "Pato de los Cordilleras," which, of course, means Duck of the Mountains.

#### *Anas cristata.*

The Crested Duck with its wonderful wing-speculum was only seen by me on Tierra del Fuego, where it was quite common.

The first time I met with it was in the Bay of Porvenir. The birds were going about in pairs, and the males seemed to be a little larger than the females, and to show a little more white in the wing when flying.

The Bay of Porvenir is a sanctuary, and the birds not being molested are quite tame.

I met with these Ducks in several inland lakes and along the coast of north-western Tierra del Fuego. They were especially numerous on the sea-shore, near the place where the blood and other refuse of the sheep, which are converted into tallow in the so-called "Grasserie" of Philips Bay belonging to the Explotadores Company, runs into the sea. They, as well as thousands of Gulls, Skuas, Oyster-catchers, etc., were feeding on this refuse.

\* I cannot tell the colour of the webs of the feet as they had been cut away and were wanting, but from what remained I should say they would be dusky.

**Mareca sibilatrix.**

I met with the Chiloe Wigeon twice in widely different places.

The first I saw were six specimens on a mountain-stream, between San Ignatio and Potrerillos, as I travelled from Mendoza to Puentes del Inca in the Andes (about 33° S. L.)\*.

The second time I noticed this species was on a small pool near Estancia Sarita, in north-western Tierra del Fuego. There were four birds, and they were the only Ducks to take wing on my approach.

**Spatula platalea.**

I met with the Red Shoveller in a small pool beyond Estancia Sarita of the Jente Grande estate in Tierra del Fuego, and I believe this is the first time that this species has been recorded from the island.

**Querquedula versicolor.**

I saw specimens of this pretty Duck on two or three pools near Estancia Sarita, in north-western Tierra del Fuego.

**Nettion flavirostre.**

I saw flocks of the Yellow-billed Teal on the Lake Todos los Santos, in southern Chile, not far from the little Peulla Settlement, and later on I found them in the pools near Estancia Sarita, in north-western Tierra del Fuego.

**Dafila spinicauda.**

Flocks of the Brown Pintail were on the Lake Todos los Santos, in southern Chile, not far from the place where I saw the little Yellow-billed Teal.

On Tierra del Fuego I saw a single specimen on the bank of a small stream near Estancia Sarita, and some more in the pools near that place.

**Merganetta armata.**

In the Argentine Republic I saw a male of the Spurred Duck flying over the Mendoza River near Caléton.

\* These birds, duly recorded as belonging to this species in my original notes, have been mentioned by error under the name of *Anas specularis* in 'Notes from the Leyden Museum,' vol. xxxv. note 1.

In Chile I met with eight specimens of this pretty Duck on a wild mountain-torrent which I passed along, travelling from Ensenade los Volcan on the Lake Llanquihué to the Lake Todos los Santos.

The birds were sitting on a big rock in the wildest part of the torrent. Five were old males and three were females—easily known by their rufous colour. They were sitting upright, very much like Cormorants.

When they saw me they jumped into the seething water and, although with their heads towards the fall of the water, they managed to stay almost in the same place, looking at me all the while. After a time they swam to another rock, jumped upon it, jumped off again into the water, dived, and reappeared at some distance, and in the end hid themselves behind some large stones. They did not take wing.

The third time I met with *Merganetta* was in a little mountain-stream, which flowed into the Nahuel Huapi Lake near Puerto Blest, in the eastern part of the Gobernacion del Rio Negro (Argentine Republic). It was a solitary female.

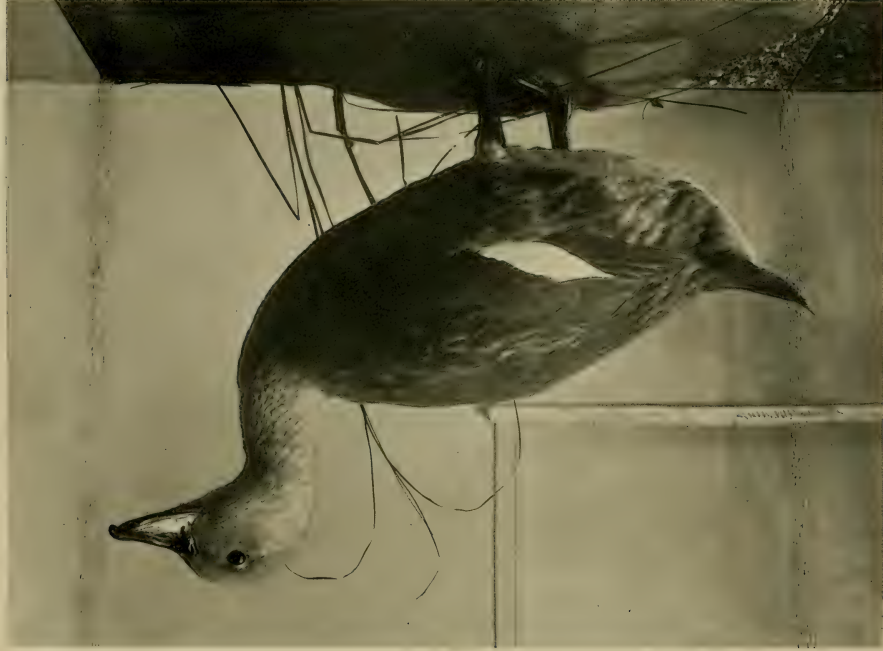
#### **Tachyeres cinereus.** (Pl. XIV.)

It is a matter of controversy amongst ornithologists whether there are one or two species of so-called Steamer Ducks, known locally as "Pato vapores."

I am sure that there are two.

The non-flying Steamer Duck, the "Sea-horse" of the old seafarers, has been known a long time, but although much has been said and written about an allied species that could fly (for instance, by Oustalet in his 'Mission scientifique du Cap Horn,' where he devotes over twenty pages to it), everything that has been said points to the fact that the actual difference between the non-flying and the allied flying species has never been clearly stated. The latter has certainly never been properly described.

What is called *Tachyeres patachonicus* is the bird aimed at, in so far as a flying bird was meant, but how that flying



Ibis, 1916, Pl. XIV.

TACHYERES CINEREUS (Male).

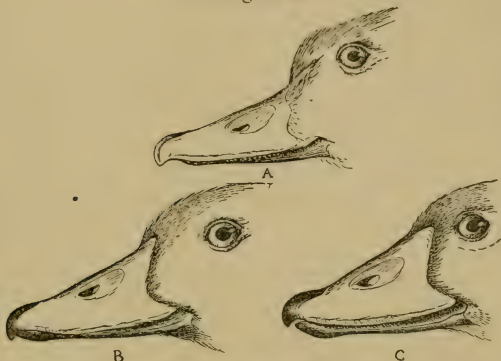
Collected at Eden Harbour, in Smith Channel,  
by E. S. BIRNIE, April, 1911

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bird could be identified and in which ways it differed from the non-flying *Tachyeres cinereus* except by its power of flight, has never been placed on record, so far as I know.

The bird figured by Oustalet as *Micropterus* (i. e. *Tachyeres*) *patachonicus* looks like an abnormally brown or immature *Tachyeres cinereus*, of which it has the bill, whilst the short bill of the bird figured as *Tachyeres cinereus* would point to its being a male of the flying species. I am afraid that Mr. Keulemans was not very accurate when he made the drawings.

Text-figure 12.



A. Head of a young example of *Tachyeres cinereus*; B. Of a female *T. patachonicus*; C. Of a male *T. patachonicus*. All from specimens from the Falkland Islands now in the Leyden Museum.

*Tachyeres cinereus*, the non-flying bird, is an enormously big and heavy Duck, with very small wings, and is entirely confined to the sea.

Both sexes when adult are grey in this species, with a white underside and a white wing-speculum. The male is the lighter coloured of the two, and has a lighter head.

The bill in both sexes when adult is orange-yellow, lighter in colour in the male. It is rather *long in shape* with a *slight depression* in the top line.

In young birds the bill is dark or spotted, and so are the legs and feet.

I met with these birds nearly everywhere in the Smith Channel and its continuations. In Eden Harbour, Indian Reach, in the Smith Channel, there were great numbers together, and I counted as many as forty-two in one flock.

I got quite near to them in a small boat, and even had one shot, but there was no signs of any bird even trying to fly. When the birds got frightened they paddled away, using their wings and feet, striking the water with their wings with great strength.

They cannot lift their heavy bodies above the water, but paddle through it, making a tremendous splashing.

Near Melinka, on the most northern island of the Chonos Archipelago, I saw families of these Ducks, that is to say, pairs of old birds with their full-grown young ones. The plumage of these young birds differed from that of the adults in some of them being tinged with brownish, whilst the bills and also the legs and feet were dark or mixed with greenish.

These birds were evidently birds of the year, as they still followed their parents. They were even heavier looking than the old birds, and most certainly could not fly nor did they attempt to do so. The birds were, however, expert divers.

At Melinka the birds were not disturbed and were as tame as domestic Ducks, sitting on pieces of rock close by the shore.

I did not meet this species north of the Chonos Archipelago.

In the Museum of La Plata I saw a young chick in down of this species. It was of a brownish olive-coloured yellow, with white eyebrow-streaks.

I brought home a living specimen of this Duck that had been caught when young in the Smith Channel. It answered the description given above of the female of *Tachyeres cinereus*. At its death it was dissected in Leyden, and my



opinion as to its sex was confirmed. The skeleton is preserved in the Leyden Museum.

The young male, which was killed in my presence in Eden Harbour, I skinned myself, and found enormously powerful muscles over the skull and a very shallow keel on the sternum. The stomach contained the remains of crabs. This bird is mounted in my own collection (see Plate XIV.).

#### **Tachyeres patachonicus.**

This flying Duck is allied to *Tachyeres cinereus*. I saw it in north-western Tierra del Fuego on the sea-shore and on the lagoons inland, and it may be described as follows:—

The adult male of this species is smaller than the male of *Tachyeres cinereus*, and is similar to it in general coloration. It is of a beautiful clear bluish grey, with a white breast and belly, and a white wing-speculum. The bill is of a brilliant orange-yellow and is wider and shorter in shape than that of *Tachyeres cinereus*. The tail is elongated and carried upright when the bird swims.

The female is much smaller than the male and quite different in colour. The head is dark brown and the rest of the body, except the white underside and white wing-bars, is of a beautiful dark wine-colour, with grey centres to the feathers of the upperside and sides. The bill, which is also short and stout, is brown or black.

I saw small flocks of these birds on and near the sea-shore of Jente Grande Bay, in north-west Tierra del Fuego, and a good many pairs on the lagoons inland.

I saw the birds repeatedly fly high overhead. I saw them fly from the sea to the lakes inland and alight in my close proximity, and, standing on the sea-shore, I saw them flying towards me from the land side.

The birds were, generally, very tame, and the pairs seemed to keep together. A pair invariably consisted of a large clear grey bird with yellow bill, and a much smaller brown one with dark bill.

If I stood still on horseback at the waterside of a lake the pairs would generally swim up to me for inspection,

showing no fear. In one of the lagoons as many as six pairs came up to me, and every pair consisted of a larger clear grey bird, as described, and a smaller brown one.

Mr. Hobbs and also Mr. Aylwin of Jente Grande, who are both observers of birds, told me that these Ducks often made their nests at a considerable distance from the water.

Besides their usual flight, these birds have a way of flying over the water, just touching it or striking it with the tips of their wings; but this is quite a different way of progressing from that of *Tachyeres cinereus*, which cannot raise itself above the water.

I saw this species only in Tierra del Fuego, and did not meet with a single specimen in the Smith Channel and more to the north.

I have seen skins of this species in the British Museum and the Leyden Museum from the Falklands, and there is a splendidly mounted pair in the Museum of Buenos Ayres from Tierra del Fuego.

XXIV.—*On the Bird-life of Houtman's Abrolhos Islands, Western Australia.* By CHARLES PRICE CONIGRAVE, F.R.G.S., M.R.A.O.U.

(Plates XV.—XVIII.)

LYING some fifty miles off the mainland of Western Australia is an archipelago of small islands known as Houtman's Abrolhos which have been very intimately connected with the early history of Australia. They were first discovered by Frederic van Houtman in the year 1605, and their name, Abrolhos, is a contraction of three Portuguese words, "abri vossos olhos," meaning keep your eyes open, owing to the danger they were to the early navigators when making their way from the Cape to Java. They were the scene of the wreck of Capt. Pelsart's ship the 'Batavia' in 1629, and the mutiny of part of his crew under Jerome Cornelis, his supercargo. The largest of the islands is called after the ill-fated Dutch Captain.